

CONTRACT/GRANT AWARD ROUTING FORM

Use this routing form for obtaining approvals (in the order listed below) for <u>every Professional or Technical Services Contract</u>, <u>MOU</u>, <u>Grant Award or other agreement</u> exceeding \$10,000. When the form is complete, the contract must be returned to the Finance Office. The Finance Office will forward those exceeding \$50,000 to DFA for additional approvals.

Contract wit	th: South Central ESC		
Approved: _	Unit Leader	Date: 03/26/16	
Approved: _	Assistant Commissioner	Date:	-
Approved: _	Finance Office	Date:	-
Approved: _	Legal Office	Date:	-
Approved: _	Commissioner/Deputy Commissioner	Date:	-
Comments_			





2016 Computer Science Professional Development Program Grant Memorandum of Understanding

This memorandum of understanding (MOU) is being entered into between the Arkansas Department of Education (ADE) and the Arkansas STEM Center, Arkansas Educational Service Cooperative, Arkansas public university, Arkansas public community college, or other public institution listed in Section I, hereinafter "INSTITUTION".

Section I – INSTITUTION Information

Name: South Central Service Cooperative

Address: 2235 California SW Avenue

Camden, AR 71701

Contact Name: Karen McMahen

Contact Email: karen.mcmahen@scscoop.org

Section II - Funding Information

Grant funding is subject to the availability of funds appropriated by legislative act for the purpose stated in the grant award. ADE reserves to right to reduce or void the grant award upon appropriated funds becoming reduced or unavailable. In addition, a grant agreement may be terminated by ADE at any time for any reason upon notice to the grant recipient.

ADE reserves the right to reduce funding if the initial funding projections are determined not to have been realistic based upon the number of actual applicants or other factors. Should additional funds become available for distribution, ADE will determine how these funds will be distributed.

Program funds shall not be obligated for expenditure before the beginning date of the grant or after the ending date of the grant. Funds may be requested only for those items that are reasonable and necessary for accomplishing the objectives of the program as defined in the application notice and for implementing activities as described.

Costs not included in the approved grant budget, including approved budget revisions, will not be reimbursed by ADE. Any costs that are incurred either before the start of the grant award or after the expiration of the grant award performance period are not allowable.

INSTITUTION must receive the benefit and liquidate all obligations incurred under the grant award no later than June 30, 2017.

For costs to be allowable to be charged to a grant, costs must generally meet the following criteria:

 Be necessary and reasonable for the performance of the grant and be allocable under the applicable cost principles





- Conform to limitations or exclusions set forth in the grant agreement as to types or amount of costs
- Be consistent with policies and procedures that apply uniformly to federally or state-funded activities and activities funded from other sources
- Be determined in accordance with generally accepted accounting principles (GAAP)
- Be adequately documented.

ADE will provide INSTITUTION up to \$48,247.50 in grant funding for the ADE approved 2016 Computer Science Professional Development Program. Forward funding, not to exceed 50% of total program funding, in the amount of \$24,123.75 will be made available to INSTITUTION on or before April 29, 2016. The remaining funding amount will be made available to INSTITUTION as reimbursements per the following schedule, subject to ADE receipt of invoices and attestations of meeting program requirements and MOU assurances.

The grant period for this funding is April 1, 2016 – June 30, 2017; INSTITUTION will return all funds not liquidated before June 30, 2017 to ADE by July 31, 2017.

FY2016 - Q4 Reimbursement

- Expenses, beyond already transferred amount, through June 20, 2016
- Invoice and attestation due to ADE on or before June 22, 2016
- Made available on or before July 29, 2016

FY2017 - Q1 Reimbursement

- Expenses, beyond already transferred amounts, through September 30, 2016
- Invoice and attestation due to ADE on or before October 4, 2016
- Made available on or before November 11, 2016

FY2017 - Q2 Reimbursement

- Expenses, beyond already transferred amounts, through December 31, 2016
- Invoice and attestation due to ADE on or before January 13, 2017
- Made available on or before February 24, 2017

FY2017 - Q3 Reimbursement

- Expenses, beyond already transferred amounts, through March 31, 2017
- Invoice and attestation due to ADE on or before April 5, 2017
- Made available on or before May 5, 2017

FY2017 – Q4 Reimbursement

- Expenses, beyond already transferred amounts, through June 20, 2017
- Invoice and attestation due to ADE on or before June 26, 2017





Made available on or before July 29, 2017

FY2017 - Final Reimbursement

- Expenses, beyond already transferred amounts, through June 30, 2017
- Invoice and attestation due to ADE on or before July 10, 2017
- Made available on or before August 4, 2017

Section III – Program Delivery

INSTITUTION will provide professional development in the content area of computer science in accordance with the attached Computer Science Professional Development Program Grant Application 2016 submitted to ADE by INSTITUTION. Any provisions within the attached Computer Science Professional Development Program Grant Application 2016 that are in conflict with any provision within this MOU are declared invalid, and INSTITUTION must adhere to all provisions within this MOU.

INSTITUTION must commence and perform project activities according to established timelines. Failure to do so may result in reduction and reallocation of funds.

Section IV - Funding Use

INSTITUTION will utilize all funding awarded under this grant for activities to provide professional development to Arkansas educators in the content area of computer science, at no charge to said educators or their employing institutions.

INSTITUTION will use Fiscal control and accounting procedures that permit the tracing of funds to a level of expenditure adequate to establish that funds have been used in accordance with grant award. The INSTITUTION must maintain effective control over and accountability for all funds, property, and other assets. The INSTITUTION'S financial management system must provide for the following:

- Identification, in its accounts, of grant awards received and expended for the program under which they were received.
- Accurate, current, and complete disclosure of the financial results of each grant award or program
- Records that identify adequately the source and application of grant funds
- Effective control over, and accountability for, all funds, property and other assets

INSTITUTION acknowledges that funding awarded under this grant is subject to all applicable federal and state laws and regulations in addition to the provisions herein Section II – Funding Information.

INSTITUTION acknowledges that it has reported planned uses for the funding and will not substantially deviate from the program approved and as indicated within the attached Computer





Science Professional Development Program Grant Application 2016 submitted to ADE by INSTITUTION

INSTITUTION <u>will not</u> use any grant award funds to either forward fund or reimburse program participants for any PRAXIS fees; INSTITUTION will direct participants that are seeking licensure endorsement to use the ADE CS PRAXIS Reimbursement Form found at http://goo.gl/yHWjFF.

INSTITUTION will insure, prior to any participant receiving a stipend as allowed under this MOU, that participant must satisfy one of the following requirements on or before June 1, 2017:

- for classroom educators completing a K-8 focus program must take part in follow-up opportunities for one school year through which they demonstrate proper CS embedding within their classes and support of other educators within their school and/or district. (maximum stipend amount of \$1,250.00)
- for district or school level educators completing a K-8 focus program must take part in followup opportunities for one school year through which they demonstrate how they are supporting broad classroom integration of the CS embedded standards through ongoing and meaningful professional development. (maximum stipend amount of \$1,250.00)
- for classroom educators completing the 7th/8th Grade Coding Block focus program must successfully instruct students in the 7th/8th Grade Coding Block standards and demonstrate support of other educators within their school and/or district in the 7th/8th Grade Coding Block standards and the embedded K-8 Computer Science Standards. (maximum stipend amount of \$1,500.00)
- for district or school level educators completing the 7th/8th Grade Coding Block focus program
 must take part in follow-up opportunities for one school year through which they demonstrate
 how they are supporting district-wide or school-wide implementation and instruction of the
 7th/8th Grade Coding Block and the embedded K-8 Computer Science Standards through
 ongoing and meaningful professional development. (maximum stipend amount of \$1,500.00)
- for any individual completing an approved professional development offering focused on preparation to pass the assessment necessary to gain an ADE Computer Science Endorsement or provisional license for non-traditional programs must be successful in attaining the ADE Computer Science Endorsement (or ADE Provisional License in Computer Science) and supporting the instruction of one or more of the approved Act 187 courses through either a face-to-face or hybrid instructional model for the 2016-2017 school year. (maximum stipend amount of \$1,750.00)

INSTITUTION and participant will ensure that acceptance of any stipend is allowed under all applicable laws and rules, including district policy, prior to stipend award.

If the INSTITUTION fails to comply with any of the terms of the grant award, whether stated in a federal statute or regulation, an assurance, a state plan, application, grant award notification, or elsewhere, ADE may take one or more of the following actions:





- Temporarily withhold payments pending correction of the deficiency by the grant recipient;
- Disallow or deny both use of funds and matching credit for all or part of the cost of the activity
 or action not in compliance with the grant;
- · Wholly or partly suspend or terminate the grant award;
- · Withhold further awards for the grant program; or,
- Take other remedies that may be legally available

Section V - Reporting

INSTITUTION will complete and submit with each reimbursement request an ADE Grant Budget/Expenditure Report and Budget Narrative found at http://goo.gl/forms/1ed8hVU4x5. Reimbursement funds will not be released to INSTITUTION until the requisite Grant Budget/Expenditure Report and Budget Narrative is submitted.

INSTITUTION will report to the ADE grant coordinator for this grant a list, in .xls file format, of all participants on July 1, 2016 and June 30, 2017 and include the following participant information:

- · First and Last Name
- Arkansas Educator Licensure System Case ID available at https://goo.gl/gDl4hl
- Official Email Address
- Employing LEA
- Current Licensure Codes same cell, comma delimited
- Grades Currently Teaching using grade bands K-2, 3-5, 6-8, 9-12
- Percentage of program competition INSTITUTION determined
- Number of scheduled PD hours, as part of this MOU, in which participant was expected to participate
- Number of scheduled PD hours, as part of this MOU, in which participant has actually participated
- Amount of any stipend awarded to participant N/A for July 1, 2016 report

Section VI - Failure to Comply

ADE reserves the right to revoke a grant award for reasons including but not limited to the following:

- Noncompliance with the specified purpose of the grant award
- Failure to account for grant funds in accordance with standards for financial management, to retain proper documentation for grant expenditures, or to provide information to auditors or program monitors
- Failure to provide accurate, timely, and complete information as requested by ADE to evaluate the effectiveness of the grantee





Section VII - Other Assurances

Administration of the program, activities, and services facilitated by the funding awarded within this MOU will be in accordance with all applicable state and federal statutes and regulations.

INSTITUTION will evaluate its program semiannually to assess its progress toward achieving its goals and objectives and use its evaluation results to refine, improve, and strengthen its program and to refine its goals and objectives as appropriate.

INSTITUTION will provide ADE representatives, and/or other state agency representatives, reasonable access to the campus and classrooms where programs and/or activities facilitated by grant funds awarded under this MOU.

INSTITUTION must disclose, in a timely manner, in writing to ADE all violations of criminal law involving, but not limited to fraud, bribery, or gratuity violations potentially affecting the grant recipient. Failure to make required disclosures can result in any of the actions described in the **Failure to Comply** section.

INSTITUTION will select and utilize a system of participant selection that is impartial and does not exclude, based on district of employ or federally protected class, any ADE Licensed Arkansas Educator.

INSTITUTION must disclose in writing any potential conflict of interest between the recipient and ADE employees. In addition, all grant recipients that receive in excess of \$25,000 will be required to complete the "Contract and Grant Disclosure and Certification Form."

Section VIII - Commingling of Funds

INSTITUTION must not deposit or record funds in a general account without the ability to identify each specific source of funds for any expenditures, which is known as commingling of funds. Funds from each Federal, State, local, and private funding source must be identified with a clear audit trail for each source. The accounting systems of all grant recipients must ensure that grant funds are not commingled with funds from other State or Federal agencies or private entities. Funds specifically budgeted and/or received for one project may not be used to support another

Section IX - Record Retention

Financial records, supporting documents, statistical records and all other records pertinent to the grant award shall be retained by the grant recipient for four years following the end of the grant award performance period. The retention requirement extends to books of original entry, source documents supporting accounting transactions, the general ledger, subsidiary ledgers, personnel and payroll records, cancelled checks, and related documents and records.

 Source documents include paper or electronic copies of all grant awards, applications and required financial and narrative reports.





- Personnel and payroll records shall include the signed time and attendance reports for all individuals included in the project, whether they are employed full-time, part-time, or on a volunteer basis.
- Time and effort reports are required for employees with grant-funded salaries.

Grant recipients must further agree to permit access to these records to ADE program or fiscal staff, or any of their authorized representatives, as needed for monitoring purpose.

Section X – Carryover of Grant Funds

Signature

All encumbrances/obligations shall occur on or between April 1, 2016 and June 30, 2017.

INSTITUTION must receive the benefit and liquidate all obligations incurred under the grant award no later than June 30, 2017

later than June 30, 2017	
If the grant recipient has not obligated all of i funds will be requested for return to ADE.	its grant funds by June 30, 2017, any unexpended grant
Johnny Key, Commissioner of Education Arkansas Department of Education	 Date
INSTITUTION Authorized Representative Printed Name	INSTITUTION Authorized Representative Title
INSTITUTION Authorized Representative	





K-12 COMPUTER SCIENCE

A FRAMEWORK FOR DYNAMIC LEARNING

- Personnel and payroll records shall include the signed time and attendance reports for all individuals included in the project, whether they are employed full-time, part-time, or on a volunteer basis.
- Time and effort reports are required for employees with grant-funded salaries.

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Section X - Carryover of Grant Funds

All encumbrances/obligations shall occur on or between April 1, 2016 and June 30, 2017.

INSTITUTION must receive the benefit and liquidate all obligations incurred under the grant award no later than June 30, 2017

If the grant recipient has not obligated all of its grant funds by June 30, 2017, any unexpended grant funds will be requested for return to ADE.

Johnny Key, Commissioner of Education Arkansas Department of Education 5/2/2016

Date

INSTITUTION Authorized Representative

Printed Name

INSTITUTION Authorized Representative

Title

NSTITUTION Authorized Representative

Signature



COMPLETE

Collector: Web Link 1 (Web Link)
Started: Monday, February 22, 2016 6:55:06 PM
Last Modified: Thursday, February 25, 2016 1:54:07 PM
Time Spent: Over a day

IP Address: 67.45.96.81

PAGE 1: General Information

Q1: Organization Name	South Central Service Cooperative	
Q2: Organization Type	Arkansas Educational Service Cooperative	
Q3: Organization LEA (if applicable)	5220	
Q4: Organization Mailing Address (Line 1)	2235 California SW Avenue	
Q5: Organization Mailing Address (Line 2) - optional	Respondent skipped this question	
Q6: Organization Mailing Address (City)	Camden	
Q7: Organization Mailing Address (Zip Code)	71701	
Q8: Contact Person (First Name)	Karen	
Q9: Contact Person (Last Name)	McMahen	
Q10: Contact Person (Email Address)	karen.mcmahen@scscoop.org	
Q11: Contact Person (Telephone XXX-XXXX)	870-836-1609	
Q12: Contact Person (Title)	Teacher Center Coordinator	

PAGE 2: Program Focus Selection

Q13: Please select a program focus for this application (NOTE: each organization may submit a separate	Embedded K-8 Computer Science Standards
application for each focus area for which they wish to	
offer)	

PAGE 3: Program Information

Q14: Provide a program description. Be certain to provide information related to the curriculum, content guide, and materials to be utilized

Most schools have listed in their motto "to provide students skills for the 21st century." What does the 21st century skills look like, and how do we provide that for our students? Coding is one very important way to prepare our students for 21st century jobs. To accomplish this in our schools, we must teach educators that coding is more than web page development and video games. Teaching students to code is teaching them how to learn. Mitchel Resnick, Professor of Learning Research at the MIT Media Lab.

Act 187 of 2015, codified as Arkansas Code Annotated (A.C.A.) § 6-16-146, requires that public high schools and public charter high schools offer at least one (1) computer science course at the high school level, beginning in the 2015-2016 school year. This course offering is subject to the provisions of A.C.A. § 6-15-213 as amended by Act 853 of 2015, meaning at least one computer science course must be made available to students. This act has been eye-opening for our districts in the sense that they are not prepared to teach students the basic computer programing skills. Many schools have expressed a need for professional development to offer and teach coding using local staff. Schools are also wanting to integrate the computer science learning in the elementary grades.

The work of the grant will be grounded in the the Arkansas Computer Science Standards. Our schools lack the understanding that many of the computer science standards already correlate with the current content standards. Implementation of the Arkansas Computer Science Standards for Grades K-8 begins during the 2017-2018 school year. The grant will provide an introduction to computing concepts that are to be embedded across other content areas and are intended to support what is already being done in the classroom. The standards support critical thinking through the essential skills of computational thinking and algorithmic problem solving. The goal of the grant is to have the course strands, content clusters, and content standards being taught in an integrated manner, not in isolation. Integration of basic computer science skills and knowledge through practical classroom experiences promote connections to all subject areas and to the real world.

"Coding to Learn" is a project provided by South Central Service Cooperative to train teachers to integrate and embed the K-8 Arkansas Computer Science Standards within multiple content areas. This project will be designed to build capacity in the districts we serve. Over the course of the grant, teachers will be introduced to the basics of coding and how the new computer science standards can be embedded in all content areas. The project will work with two curriuclum companies: Code.org and Tynker.com. With the combinations of these products teachers will have access to an estimated total of 45-50 lessons and many activities from which to teach. This project will also train participants to teach others in their respective districts how to integrate the computer science standards in all areas of the curriculum.

The project will provide instruction for code.org projects and Tynker.com. Code.org provides elementary, middle school, and high school curriculum at no cost to schools. The CS Fundamentals curriculum is implemented within Code Studio, Code.org's online coding platform. This completely free curriculum consists of multiple courses, each of which has about 20 lessons that may be implemented as one unit or over the course of a semester. Code.org will provide a one day traing to participants to prepare educators and content-area teachers to introduce computer science basics. Code.org will be the emphasis for the first semester of the project. In the second semester, teachers will be introduced to Tynker.com. Tynker is a creative computing platform where millions of kids have learned to program and build games, apps and more. Tynker offers self-paced online courses for children to learn coding at home, as well as an engaging programming curriculum for schools. The Tynker.com curriculum will be purchased for each participant. Each teacher will have a tynker classroom. Each K-8 classroom has curriculum for around 17 lessons, automatic assessments, creativity tools and classroom management tools.

In the beginner courses, students use a Drag-and-Drop interface that makes building games really easy. There are over 200 visual blocks that snap into programs, students can build the most complex games with ease. Each course has guided learning which combines a built in tutor and step- by-step projects. Tutorials teach students how to apply concepts, with step-by-step instructions to complete projects without frustration. Students receive a prompt, and create games and projects based on the instructions provided. The courses are designed to start visually and gradually move to fundamental programming concepts like events, variables, loops, functions, and principles of computational thinking. In the advanced courses, once proficient, students can seamlessly transition to Javascript coding and more advanced projects.

Future work in computer science is to provide teachers of grades 7-8 the training needed to offer the coding block for grades 7-8. Implementation of the Arkansas Computer Science Standards Coding Block for Grades 7 or 8 begins during the 2017-2018 school year.

Q15: If your organization plans to contract with an outside vendor/provider to provide professional development, provide the name and website URL for that vendor/provider. (N/A for not applicable)

Code.org-www.code.org
Tynker-www.tynker.com

Q16: Provide a schedule for the program. Be certain to include the days, times, and number of hours that the sessions are to meet.

Summer 2016

- (Day 1) Code.org Training 6 hours July 28
- (Day 2) Code.org followup 6 hours October 1
- (Day 3) Code.org followup 6 hours November 12
- (Day 4) Tynker.com Training 6 hours January 2
- (Day 5) Tynker.com Training 6 hours January 16
- (Day 6) Tynker.com followup 6 hours February 18

Q17: Provide a detailed plan to document evidence of program performance and success of the participants including all required and requested reporting.

To quantitatively evaluate the project, a data set will be compiled for each grade level to show the concept mastery. The program performance will utilize the Tynker platform. As students progress through each lesson, Tynker automatically assesses their mastery of skills through puzzles, quizzes and code analysis. Teachers can view classwide mastery of concepts and progression through lessons and compare student progress and proficiency using the Gradebook and the integrated Concept Map. Each work day teachers will submit their class concept map with project leader. Qualitatively to evaluate the project, each class will share a collection of student projects with all participants. This showcase will be shared via the cooperative website, Facebook, Twitter and Google + accounts.

Q18: Provide the qualifications required for all staff and instructors. If a project manager or director can be identified, please do so at this time.

Qualifications for participants

All participants must be K-8 teachers employed in a school(s) in the South Central Service Cooperative area. The teacher of record for the coding lessons for Grades K-8 must hold an Arkansas Educator's License in any content area, which allows them to instruct students of the grade level who are participating in the lessons. Though the licensure is open to any content area, it is the responsibility of the school and teacher of record to ensure that the individual providing the instruction has the requisite knowledge needed to teach the block.

Qualifications for trainers

The trainers for the Code.org and Tynker.com training will be trainers affliated with the companies. Trainers for the follow-up days will be employees of the South Central Service Cooperative.

Project Manager-JoAnn Womack, technology coordinator

Project Director-Karen Kay McMahen, teacher center coordinator

PAGE 4: Program Budget

Q19: Total Grant Amount Requested	68500.0
Q20: Grant Forward Funding Requested in Dollar Amount (maximum of 50% of total proposed grant) - NOTE: organization will be required to return all unused or excess funding once program completion information is submitted.	34250
Q21: Proposed Cost Per Participant	2169.0
Q22: Estimated Number of Participants	30.0

Q23: Summary of the Program's Proposed Budget

BUDGET

Participant stipends 30@ \$1250 37,500

Tynker.com 30 teachers

2 classrooms per school 21,000

Tynker.com training 2,000 + expenses/day (2 days) 7,000

Administrative costs (5% of total grant) 3,425

GRANT TOTAL 68,500

Q24: Completer Individual Stipend Amount (if applicable) 1250.0

Q25: Total Amount Allocated for Participant Stipends (if applicable)

PAGE 5: Assurances and Certification

Q26: WE, THE UNDERSIGNED, CERTIFY that the information contained in this application, is complete and accurate to the best of our knowledge; that the necessary assurances of compliance with applicable state and federal statutes, rules, and regulations will be met; and, that the indicated organization designated in this application is authorized to administer this grant. WE FURTHER CERTIFY that the assurances listed above, have been or will be satisfied and that all facts, figures, and representations in this application are correct to the best of our knowledge.

Yes

Q27: First and last name of the authorized Representative certifying this application on behalf of the organization.

Karen Kay McMahen

Q28: Title of authorized Representative certifying this application on behalf of the organization.

Teacher Center Coordinator

Subject: proposed amendment to grant

Tuesday, March 15, 2016 at 9:37:02 AM Central Daylight Time Date:

From: Karen McMahen To: Anthony Owen (ADE)

Mr. Owen,

I am attaching the pdf you requested of South Central's Coding Grant. The highlighted areas are the amended portions of the grant. Please let me know if you need anything else.

Karen Kay McMahen Teacher Center Coordinator South Central Service Cooperative 2235 California Ave. SW Camden, AR 71701 Phone & Fax 870-836-1609

"In the 21st century, the question is not what do you know, but rather what can you do with what you know and how do you update your knowledge continuously?" -Toney Wagner, 2009

South Central Service Cooperative Coding Grant-Amended Proposal

14. Provide a program description-Be certain to provide information related to the curriculum, content guide, and materials to be utilized.

Most schools have listed in their motto "to provide students skills for the 21st century." What does the 21st century skills look like, and how do we provide that for our students? Coding is one very important way to prepare our students for 21st century jobs. To accomplish this in our schools, we must teach educators that coding is more than web page development and video games. Teaching students to code is teaching them how to learn. Mitchel Resnick, Professor of Learning Research at the MIT Media Lab. Act 187 of 2015, codified as Arkansas Code Annotated (A.C.A.) § 6-16-146, requires that public high schools and public charter high schools offer at least one (1) computer science course at the high school level, beginning in the 2015-2016 school year. This course offering is subject to the provisions of A.C.A. § 6-15-213 as amended by Act 853 of 2015, meaning at least one computer science course must be made available to students. This act has been eye-opening for our districts in the sense that they are not prepared to teach students the basic computer programing skills. Many schools have expressed a need for professional development to offer and teach coding using local staff. Schools are also wanting to integrate the computer science learning in the elementary grades. The work of the grant will be grounded in the the Arkansas Computer Science Standards. Our schools lack the understanding that many of the computer science standards already correlate with the current content standards. Implementation of the Arkansas Computer Science Standards for Grades K-8 begins during the 2017-2018 school year. The grant will provide an introduction to computing concepts that are to be embedded across other content areas and are intended to support what is already being done in the classroom. The standards support critical thinking through the essential skills of computational thinking and algorithmic problem solving. The goal of the grant is to have the course strands, content clusters, and content standards being taught in an integrated manner, not in isolation. Integration of basic computer science skills and knowledge through practical classroom experiences promote connections to all subject areas and to the real world.

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will be designed to build capacity in the districts we serve. Over the course
of the grant, teachers will be introduced to the basics of coding and how the
new computer science standards can be embedded in all content areas.
The project will work with two curriuclum companies: Code.org and
Tynker.com. With the combinations of these products teachers will have
access to an estimated total of 45-50 lessons and many activities from
which to teach. This project will also train participants to teach others in
their respective districts how to integrate the computer science standards in
all areas of the curriculum.

The project will provide instruction for code.org projects and Tynker.com. Code.org provides elementary, middle school, and high school curriculum at no cost to schools. The CS Fundamentals curriculum is implemented within Code Studio, Code.org's online coding platform. This completely free curriculum consists of multiple courses, each of which has about 20 lessons that may be implemented as one unit or over the course of a semester. Code.org will provide a one day traing to participants to prepare educators and content-area teachers to introduce computer science basics. Code.org will be the emphasis for the first semester of the project. During the first semester there will be two Saturday sessions. In these sessions emphasis will be producing a crosswalk of curriculum standards for content and computer science standards. The expectation is to have teachers prepare one lesson and teach others in their districts for project outreach. This one lesson will be part of a professional development in the individual schools. The crosswalks and sample lessons developed will be shared on the cooperative website with all schools to encourage computer science participation. In the second semester, teachers will be introduced to Tynker.com. Tynker is a creative computing platform where millions of kids have learned to program and build games, apps and more. Tynker offers self-paced online courses for children to learn coding at home, as well as

an engaging programming curriculum for schools. The Tynker.com curriculum will be purchased for each participant. Each teacher will have a tynker classroom. Each K-8 classroom has curriculum for around 17 lessons, automatic assessments, creativity tools and classroom management tools.

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Future work in computer science is to provide teachers of grades 7-8 the training needed to offer the coding block for grades 7-8. Implementation of the Arkansas Computer Science Standards Coding Block for Grades 7 or 8 begins during the 2017-2018 school year.

16. Provide a schedule for the program. Be certain to include the days, times, and number of hours that the sessions are to meet.

2016-2017

(Day 1) Code.org Training	6 hours	Thursday July 28			
(Day 2) Code.org followup/					
Crosswalk Work	<mark>6 hours</mark>	Saturday, October 1			
(Day 3) Crosswalk Work	6 hours	Saturday, November 12			
(Day 4) Tynker.com Training	6 hours	Monday, January 2 (New			
Year's Day, observed)					
(Day 5) Crosswalk Work/Lesson	6 hours	Saturday, February 18			

17. Provide a detailed plan to document evidence of program performance and success of the participants including all required and requested reporting.

To quantitatively evaluate the project, a data set will be compiled for each grade level to show the concept mastery. The program performance will utilize the Tynker platform. As students progress through each lesson, Tynker automatically assesses their mastery of skills through puzzles, quizzes and code analysis. Teachers can view class-wide mastery of concepts and progression through lessons and compare student progress and proficiency using the Gradebook and the integrated Concept Map. Each work day teachers will submit their class concept map with project leader. Qualitatively to evaluate the project, each class will share a collection of student projects with all participants. This showcase will be shared via the cooperative website, Facebook, Twitter and Google + accounts.

18. Provide the qualifications required for all staff and instructors. Project manager or director can be identified.

Qualifications for participants

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Qualifications for trainers

The trainers for the Code.org and Tynker.com training will be trainers affliated with the companies. Trainers for the follow-up days will be employees of the South Central Service Cooperative.

Project Manager-JoAnn Womack, technology coordinator Project Director-Karen Kay McMahen, teacher center coordinator

BUDGET

30,000.00
11,970.00
3,000.00
3,277.50
<mark>48,247.50</mark>